

Eric LESCOUET, *et al.*
Serial No. 10/573,918
February 28, 2011

AMENDMENTS TO THE DRAWINGS:

Applicants submit concurrently herewith ten (10) replacement sheets of drawings illustrating Figs. 1, 2a, 2b, 3-8, 9a, 9b and 10-13.

Attachments: Replacement Sheets: 10

REMARKS/ARGUMENTS

Reconsideration of this application is respectfully requested.

In response to the formality-based drawing objections, reference signs not found in the drawings have now been deleted from the written text of the specification – and a complete new set of more legible replacement drawings are concurrently submitted herewith.

As requested, the related application paragraph has been updated with the current status of applications reference therein.

As requested, the few instances of acronyms that do not already first include a description in plain text have been amended so as to do so.

Similarly, in response to the objection due to imbedded hyperlinks or other forms of browser-executable code, such have been deleted by the above amendments.

In response to the formality-based objections to claims 29 and 30, these claims have also been amended so as to moot the Examiner's stated grounds for objection.

The provisional double-patenting rejections *vis-à-vis* compending related application Serial Nos. 10/552,608 and 10/573,881 are noted. However, since the final form of claims to be allowed in these applications has not yet been determined and/or because of the above amendments to the claims in this present application, no further action at this time is believed to be required.

The rejection of claims 8-10 and 32 under 35 U.S.C. §112, second paragraph, claims 8, 9, 10 and 32 have been amended so as to obviate the Examiner's stated grounds for rejection. With respect to the amendments to claims 8-10 and the Examiner's queries as to what is intended by "real mode", reference may be had to page 27, line 19 *et seq.* for a more detailed understanding of a corresponding part of the exemplary embodiment.

The rejection of claims 1-4, 6-7, 12-22 and 25-31 under 35 U.S.C. §102 as allegedly anticipated by Ohno '016 is respectfully traversed.

Similar objections were raised in European and Chinese counterpart applications. The above amendment to independent claims 1 and 30 incorporates therein features previously found in dependent claims 2, 4 and 5 (which dependent claims have now been cancelled without prejudice or disclaimer).

Ohno discloses an "inter-OS control software" (see reference numeral 23 in Fig. 1) that switches between an operating system A (OS-A) and an operating system B (OS-B) (see 1:65-67). The switching is performed in response to an interrupt or in response to an explicit request from OS-A or OS-B (see 2:4-10). The inter-OS control software is embedded as a device driver in OS-A (see 4:12-14).

When the inter-OS control software is called by OS-A, this is effected by an operation instruction (e.g., an IOCTL instruction) directed to the device driver that embeds the inter-OS control software (see 6:38 to 42).

This is different from the presently claimed invention in which the common program is invoked by the first (or second operating system) by calling an exception vector to simulate an exception caused by an external event.

Furthermore, in Ohno, when the inter-OS control software is called by OS-B, this is implemented by a function call (see 6:43-45). Calling the inter-OS control software by means of a function call is not possible if the memory (and execution) contexts of the caller (OS-B) and the inter-OS control software are totally separated. That is, to allow OS-B to "call" the inter-OS control software, OS-B and the inter-OS control software must share at least part of the memory context (e.g., code section, and stack and data for argument passing). In addition, OS-B and the inter-OS control software need to execute the call in a similar CPU context (i.e., the same CPU mode).

In other words, all or part of the inter-OS control software (the callee) memory context must be visible to / accessible by the OS-B (the caller).

This is in marked contrast to the applicants' invention, which makes it possible to totally separate the memory and execution contexts of the operating systems and the common program. This is made possible, e.g., by changing MMU and CPU execution

contexts while branching to a given address (e.g., RFI or TRAP). This, in turn, is caused by having the first or second operating system invoke the common program by calling an exception vector, to thereby simulate an exception caused by an external event, as now recited in both independent claims 1 and 30.

Given the fundamental deficiencies of Ohno already noted above for independent claims 1 and 30, it is not necessary at this time to detail additional deficiencies of Ohno with respect to other aspects of the rejected claims. Suffice it to note that, as a matter of law, it is impossible to support a *prima facie* case of anticipation unless a single cited prior art reference teaches each and every feature of each rejected claim.

The rejection of claims 8-10 under 35 U.S.C. §103 as allegedly being made "obvious" based on Ohno in view of Blanset '040 is also respectfully traversed.

Fundamental deficiencies of Ohno have already been noted above for parent claim 1. Blanset does not supply those deficiencies. Accordingly, it is unnecessary at this time to detail additional deficiencies of this allegedly "obvious" combination of references with respect to the additional aspects of these rejected claims.

The rejection of claims 5, 11 and 23-24 under 35 U.S.C. §103 as allegedly being made "obvious" based on Ohno in view of Endo '303 is also respectfully traversed.

Once again, fundamental deficiencies of Ohno have already been noted above with respect to parent claim 1. Endo does not supply those deficiencies. However,

because the substance of claim 5 is now found in the independent claims, Endo will be discussed in some more detail below.

The Examiner has stated that the feature of calling an exception vector to invoke the common program as simulating an exception caused by an external event was known from Endo and, in so doing, the Examiner has referenced 6:38-60. However, the applicants are unable to identify a factual basis for this objection there – or elsewhere in Endo.

Endo discloses a computer system comprising a general purpose OS 116, a real time OS 117, and an inter-OS control function 124 (erroneously designated 127 in Fig. 1). The inter-OS control function 124 includes an OS context switching module 127, a common interrupt handler 128 and an interrupt management table 129. The OS context switching module 127 is provided in order to switch execution environments of the general purpose OS 116 and the real time OS 117. The common interrupt handler 128 is provided to distribute interrupt commands to the operating systems 116, 117. The interrupt management table 129 is provided to store interrupt demands for the operating systems and interrupt start addresses (see 6:4-10).

Each operating system comprises its own interrupt handlers 122, 123, which receive interrupt demands from input and output devices. Also, the interrupt handlers 122, 123 are called by the common interrupt handler 128 to cause execution of interrupt processing programs (see 6:38-46).

Furthermore, each operating system comprises its own re-scheduler 118, 119 for scheduling the execution of new tasks, for example, in response to external or internal interrupts (see 6:51-54).

However, Endo contains no suggestion whatsoever that the operating systems simulate exceptions caused by an external event, to thereby invoke the common program (the inter-OS control software). It is noted that this feature is described in more detail on page 31 of applicants' specification. If the Examiner continues to believe that this feature is disclosed by Endo, the Examiner is respectfully asked to identify and explain the factual basis for this belief.

Given such fundamental deficiencies as already noted with respect to both Ohno and Endo, it is not believed necessary at this time to detail additional deficiencies of this allegedly "obvious" combination of references with respect to other aspects of the rejected claims. Suffice it to note that, as a matter of law, in order to make out a *prima facie* case of "obviousness", the cited prior art must collectively teach or suggest each and every feature of each rejected claim.

The rejection of claim 32 under 35 U.S.C. §103 as allegedly being made "obvious" based on Ohno in view of Cota-Robles '089 is also respectfully traversed.

Of course, the applicants are not claiming to be the first to have used a computer with a reduced instruction set. However, Cota-Robles does not otherwise supply any of

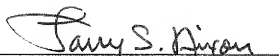
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the deficiencies already noted with respect to a parent claim and, thus, no further comment is necessary. Under 35 U.S.C. §103, the applicants' claimed subject matter must be considered "as a whole" and cannot be dissected in piecemeal fashion by merely finding, in some other context, an isolated feature of the entirety of the invention being claimed.

Accordingly, this entire application is now believed to be in allowable condition, and a formal notice to that effect is earnestly solicited.

Respectfully submitted,

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